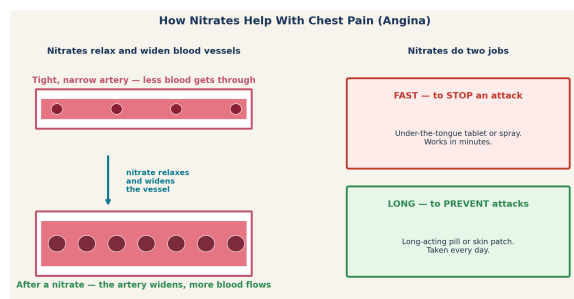


Understanding Nitrates

Nitroglycerin and isosorbide — medicines that ease and prevent chest pain (angina)

Nitrates relax and widen blood vessels so the heart works less. Never take them with erectile-dysfunction drugs.



Online: <https://go.riasalimd.com/nitrates-guide>

Rias KS Ali, MD FACC

Board Certified in Interventional Cardiology & Cardiovascular Disease

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 |
RiasAliMD.com

Last Updated: August 2026



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>

1 of 20 | Page



Save
Contact Info

Names & Terms You Will Hear

Term	Meaning
Nitrate	A family of heart medicines that relax and widen blood vessels to ease and prevent chest pain (angina).
Nitroglycerin (Nitrostat, Nitrolingual, Nitro-Dur, NitroMist)	The best-known nitrate. Comes as a fast under-the-tongue tablet or spray, and as a long-acting skin patch.
Sublingual	Means 'under the tongue.' The fast tablet or spray is placed there so it works in minutes.
Isosorbide dinitrate / isosorbide mononitrate (Isordil, Imdur)	Long-acting nitrate pills taken every day to PREVENT angina.
Long-acting nitrate	A pill or skin patch that works for many hours to keep angina away.
Nitrate-free interval	A planned gap each day with no nitrate in the body. It keeps the medicine from losing its effect.
Nitrate tolerance	When a nitrate slowly stops working because the body is exposed to it around the clock. The daily gap prevents this.
Angina	Chest pain or pressure that happens when the heart muscle does not get enough blood. Nitrates are a main treatment.

The most important safety rule: never take any nitrate with an erectile-dysfunction drug — sildenafil (Viagra), tadalafil (Cialis), or vardenafil. Together they can drop your blood pressure to a deadly level. **And during an attack:** if chest pain is severe, or is not better after one dose under the tongue, **call 911 right away** — do not wait it out.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>

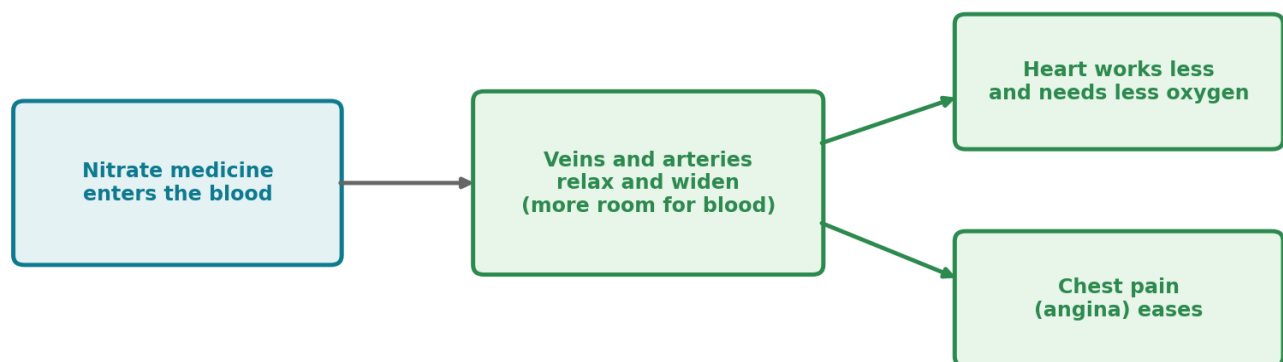


Save
Contact Info

What Is Nitrates?

- Nitrates are some of the oldest heart medicines. Nitroglycerin has been used for chest pain for more than 140 years.
- They turn into a natural gas in the body called nitric oxide. This signals blood vessels to relax and widen.
- When vessels widen, less blood crowds back into the heart and the heart pumps against less pressure. So the heart needs less oxygen.
- Because the heart works less hard, the squeezing chest pain of angina eases or is prevented.
- Nitrates do not open blocked arteries or cure heart disease. They ease the heart's workload and relieve symptoms.
- They come in two main roles: a FAST form to stop an attack, and a LONG-acting form to prevent attacks. The next sections explain each.

How Nitrates Ease the Heart's Work



Nitrates turn into nitric oxide, which relaxes and widens veins and arteries. The heart pumps against less pressure and needs less oxygen, so the chest pain of angina eases.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Why It Matters

- Angina can limit what you do every day. Nitrates can stop an attack within minutes and let you get back to your activity.
- Carrying fast-acting nitroglycerin gives you a safe, proven tool the moment chest pain starts.
- Long-acting nitrates lower how often angina strikes, so many people walk farther and do more with less pain.
- Guidelines (the 2023 AHA/ACC chronic coronary disease guideline) list long-acting nitrates as a core medicine to prevent angina.
- Nitrates work well alongside beta-blockers and other heart medicines. See our beta-blockers guide below.
- Knowing how to use the fast dose — and when to call 911 — can save your life if chest pain turns out to be a heart attack.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Role 1 — Fast-Acting: To STOP an Attack

- This is the under-the-tongue tablet (like Nitrostat) or the mouth spray (like Nitrolingual or NitroMist).
- It works within minutes. You use it the moment chest pain (angina) starts — not every day.
- Carry it with you at all times so it is ready when you need it.
- Sit down before you take it, because it can make you lightheaded.

Role 2 — Long-Acting: To PREVENT Attacks

- This is a daily pill (isosorbide, such as Imdur or Isordil) or a skin patch (such as Nitro-Dur).
- You take it on a set schedule to keep angina from starting — not to treat an attack already happening.
- It needs a daily nitrate-free gap (often overnight, or patch off for part of the day) so it keeps working.
- It is often used together with a beta-blocker or other heart medicines. See our beta-blockers guide.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Risk Factors

Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

Risk Factor	Why It Increases Risk
You have stable angina from coronary artery disease	Nitrates are a main treatment — a fast dose for attacks and often a long-acting dose to prevent them.
Your angina is limiting your daily activity	A long-acting nitrate, added to other medicines, can lower how often angina strikes.
You take an erectile-dysfunction drug (sildenafil, tadalafil, vardenafil)	This is a reason NOT to take nitrates. The combination can cause a dangerous drop in blood pressure.
You have very low blood pressure or severe aortic valve narrowing	Nitrates may not be safe. Your doctor will weigh this carefully before prescribing them.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Treatment Options

- For an attack: stop, sit down, and place ONE fast dose under your tongue. Let it dissolve — do not chew or swallow it.
- Wait about 5 minutes. If the pain is severe, or it is not better after that one dose, call 911 right away. Do not wait it out.
- While you wait for help, you may take up to two more doses, one every 5 minutes (three doses total) — but call 911 first.
- To prevent angina, a long-acting pill or skin patch is taken every day on a set schedule your doctor gives you.
- Long-acting nitrates need a daily nitrate-free gap (often overnight, or patch off for part of the day). This keeps them working.
- Store fast-acting nitroglycerin in its original dark glass bottle, tightly closed, away from heat and light. It can lose strength over time.
- Tablets often last only a few months after the bottle is opened. Replace them as your pharmacist or label directs so they work when you need them.
- Never take any nitrate with an erectile-dysfunction drug. Tell your doctor about every medicine and supplement you use.



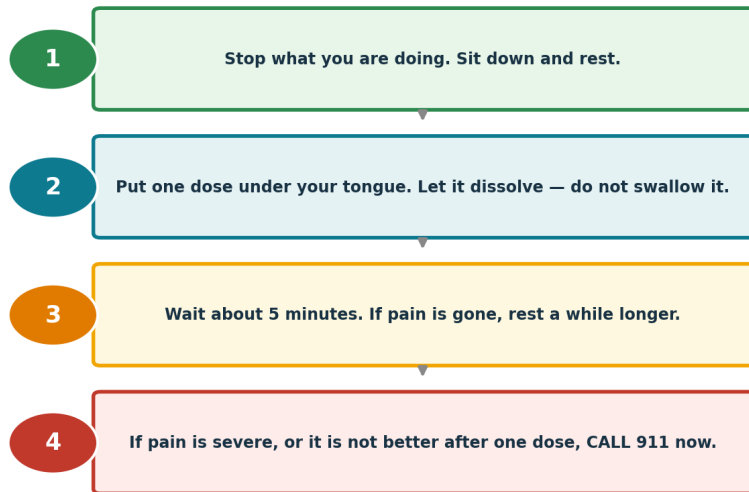
Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

What To Do During an Angina Attack



What to do when angina starts and you carry fast-acting nitroglycerin. Stop and sit, take one dose under the tongue, and if the pain is severe or not better after one dose, call 911.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Nitrate Forms — Which One Does What

Form	Examples	When it is used	How fast it works
Under-the-tongue tablet	Nitrostat	To STOP an attack	Within minutes
Mouth spray	Nitrolingual, NitroMist	To STOP an attack	Within minutes
Long-acting pill	Isosorbide (Imdur, Isordil)	To PREVENT attacks	Hours; taken daily
Skin patch	Nitro-Dur	To PREVENT attacks	Hours; worn part of the day



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

How To Use the Fast Dose During an Attack

- Step 1: Stop what you are doing and sit down to rest.
- Step 2: Place ONE dose under your tongue (or use one spray). Let it dissolve — do not swallow it.
- Step 3: Wait about 5 minutes. If the pain is gone, rest a while longer before getting up.
- Step 4: If the pain is severe, or is not better after that one dose, CALL 911 now. You may take up to two more doses, 5 minutes apart, while you wait for help.
- If you are not sure whether it is angina or a heart attack, treat it as an emergency and call 911. See our chest pain guide.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Comfort Measures at Home (No Medication Needed)

These simple steps support healing and ease symptoms. Use them alongside any medication your doctor prescribes.

- Sit or lie down before taking a dose. Nitrates can make you lightheaded, and sitting lowers the chance of a fall.
- Stand up slowly afterward. Rise from sitting or lying in two steps to avoid dizziness.
- A headache after a dose is common and usually fades. A plain acetaminophen (Tylenol) often helps — ask us first.
- Keep your fast-acting nitroglycerin with you at all times, and check the expiration date so a fresh supply is ready.
- Take long-acting nitrates at the same times each day so the daily nitrate-free gap stays in place.
- Avoid alcohol around a dose. It can add to the drop in blood pressure and make you dizzy.

The Daily Nitrate-Free Gap Keeps Them Working

One full day (24 hours)



Long-acting nitrates need a planned nitrate-free gap each day — often overnight. Without it, the medicine slowly stops working (tolerance).



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Fast-acting nitroglycerin (under the tongue or spray) for an angina attack	Headache, flushing, lightheadedness, low blood pressure. Sit down before each dose.	Stops most angina attacks within minutes. A safe tool to carry and use the moment pain starts.	Rest alone for mild pain. If pain does not ease quickly, the alternative is to call 911 for emergency care.
Long-acting nitrate (pill or skin patch) to prevent angina	Headache (often eases over days), lightheadedness, losing effect without a daily nitrate-free gap.	Fewer angina attacks; many people do more with less chest pain. A core preventive medicine.	Beta-blockers, calcium channel blockers, or ranolazine — alone or added. See our beta-blockers guide.
Adding a nitrate to other anti-anginal medicines	More chance of low blood pressure or dizziness when combined with other blood-pressure-lowering drugs.	Better symptom control when one medicine is not enough.	A procedure to open the artery (a stent) or bypass surgery for the right patients. See our CAD guide.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Common Misconceptions

Myth	Reality
Nitroglycerin unblocks my arteries.	It does not. Nitrates widen blood vessels and lower the heart's workload, which eases pain. They do not clear out the blockage. Opening a blockage takes a stent or surgery.
If one dose under the tongue does not work, I should keep taking doses and wait.	No. Modern advice is to call 911 if the pain is severe or is not better after one dose. Do not wait through all three doses before getting help — it could be a heart attack.
I can take my nitroglycerin and my erectile-dysfunction pill if I just space them apart.	This is dangerous. Nitrates and drugs like sildenafil (Viagra), tadalafil (Cialis), or vardenafil must NEVER be combined. Together they can drop your blood pressure to a deadly level. Tell every doctor you take a nitrate.
My nitroglycerin lasts for years in the bottle.	It can lose strength, especially once the bottle is opened or exposed to heat and light. Keep it in its dark glass bottle and replace it as directed so it works when you need it.
A headache means the nitrate is harming me.	Headache is the most common side effect and usually means the medicine is working. It often fades over days. Tell us if it is severe or does not settle.
I can take my long-acting nitrate around the clock for the best protection.	Around-the-clock use actually makes nitrates stop working (tolerance). A planned nitrate-free gap each day is what keeps them effective.
Nitrates are addictive.	They are not addictive. But a long-acting nitrate should not be stopped suddenly — talk with us before any change.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Blood pressure	Nitrates can lower blood pressure too much, causing lightheadedness or fainting, especially when standing. Sit down before each dose and rise slowly.
Head and skin	Headache and facial flushing are the most common effects. Headache usually eases over days; acetaminophen often helps.
Drug interaction — erectile-dysfunction drugs	Combined with sildenafil (Viagra), tadalafil (Cialis), or vardenafil, nitrates can cause a severe, even fatal, drop in blood pressure. This combination is never allowed.
Losing effect (tolerance)	Around-the-clock nitrate exposure makes the medicine stop working. A daily nitrate-free gap prevents this.
Rare effects	Fast heartbeat, blurred vision, or a rare blood problem (methemoglobinemia) can occur. Call us for severe or unusual symptoms.
Stopping suddenly	A long-acting nitrate should not be stopped abruptly, which could trigger more angina. Change it only with your doctor.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Points to Know

If you remember nothing else, remember these key points.

- Nitrates relax and widen blood vessels so the heart works less and chest pain eases.
- Fast-acting nitroglycerin (under the tongue or spray) **STOPS** an attack; long-acting pills or patches **PREVENT** attacks.
- During an attack: stop, sit, take one dose. If pain is severe or not better after one dose, call 911.
- Never combine nitrates with erectile-dysfunction drugs (sildenafil, tadalafil, vardenafil) — it can cause a deadly drop in blood pressure.
- Long-acting nitrates need a daily nitrate-free gap to keep working.
- Headache and lightheadedness are common; sit down before each dose.
- Store fast-acting nitroglycerin in its dark bottle and replace it as directed — it can lose strength.
- Tell every doctor, dentist, and pharmacist that you take a nitrate.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- Chest pain that is severe, or not better after one dose under the tongue — call 911.
- Chest pain with sweating, nausea, or pain spreading to the arm, jaw, or back — call 911.
- You took a nitrate after an erectile-dysfunction drug and feel faint, very dizzy, or have a pounding heartbeat — call 911.
- Fainting or near-fainting after a dose — call 911 if you do not wake quickly; otherwise call us today.
- A headache after your nitrate that is severe or will not settle — call us.
- Your fast-acting nitroglycerin does not seem to work or has expired — call us for a fresh supply.
- You need angina relief more often than usual, or with less activity — call us this week; your plan may need to change.
- You are starting any new medicine and are not sure if it is safe with a nitrate — call us before you take it.

Office: (727) 943-5200



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- [American Heart Association — Angina \(Chest Pain\)](#) - Patient-friendly overview of angina and how nitroglycerin relieves it.
- [Cleveland Clinic — Nitroglycerin Tablets](#) - How to take the fast and long-acting forms, side effects, and the drug-interaction warning.
- [MedlinePlus — Nitroglycerin Sublingual](#) - NIH/NLM plain-language instructions for safe dosing, storage, and warnings.
- [Our Stable Angina Guide](#) - What angina is and the full plan to control it, including nitrates.
- [Our Chest Pain Guide](#) - How to tell apart kinds of chest pain and when it is an emergency.
- [Our Coronary Artery Disease Guide](#) - The blocked-artery disease behind most angina, and how we treat it.
- [Our Beta-Blockers Guide](#) - Another core anti-anginal medicine often used together with nitrates.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- [American Heart Association — Angina \(Chest Pain\)](#) [Patient Education]
Plain-language role of nitroglycerin in relieving angina, how/when to take sublingual doses, and the call-911 rule if pain persists.
- [Cleveland Clinic — Nitroglycerin Tablets](#) [Patient Education]
Covers sublingual, patch, and long-acting nitrate forms, headache/low-BP side effects, and the PDE5-inhibitor interaction warning.
- [MedlinePlus — Nitroglycerin Sublingual](#) [Patient Education]
NIH/NLM drug monograph for safe dosing, storage, nitrate-free interval to prevent tolerance, and contraindications.
- [MedlinePlus — Isosorbide Mononitrate](#) [Patient Education]
NIH/NLM monograph for the long-acting nitrate used to PREVENT angina, including the daily dose-spacing that builds in a nitrate-free interval.
- [Mayo Clinic — Nitroglycerin \(Oral/Sublingual Route\)](#) [Patient Education]
Patient-facing dosing and precautions, the sit-down-before-dosing tip, and the dangerous interaction with erectile-dysfunction drugs.
- [2023 AHA/ACC/ACCP/ASPC/NLA/PCNA Guideline for the Management of Patients With Chronic Coronary Disease](#) [Guideline]
Current guideline basis for long-acting nitrates as anti-anginal therapy, the need for a nitrate-free interval to avoid tolerance, and the PDE5 contraindication.
- [FDA Label — Nitrostat \(Nitroglycerin Sublingual Tablets\)](#) [Drug Label]
Official prescribing information: sublingual dosing for an attack, the call-for-help timing, storage to preserve potency, and the absolute PDE5-inhibitor contraindication.
- [FDA Label — Imdur \(Isosorbide Mononitrate Extended-Release\)](#) [Drug Label]
Prescribing information for the long-acting nitrate, including the once-daily dosing schedule designed to provide a nitrate-free interval and limit tolerance.
- [AHA Scientific Statement — Sexual Activity and Cardiovascular Disease \(PDE5 inhibitor + nitrate interaction\)](#) [Guideline]
Authoritative statement that PDE5 inhibitors (sildenafil, tadalafil, vardenafil) are contraindicated with nitrates because of severe, potentially fatal low blood pressure.
- [StatPearls \(NIH NCBI Bookshelf\) — Nitroglycerin](#) [Reference]
Mechanism (nitric oxide donor causing vein and artery widening that lowers the heart's workload and oxygen need), the tolerance mechanism, and the PDE5 interaction.
- [American Heart Association — Cardiac Medications](#) [Patient Education]
Places nitrates among the heart medicines and frames their role in relieving and preventing angina alongside beta-blockers and other anti-anginals.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

About This Guide

Rias KS Ali, MD FACC | Board Certified in Interventional Cardiology & Cardiovascular Disease

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com

Version: 2026-08-15

Reviewer note: Reviewed: Cleveland Clinic, Mayo Clinic, AHA, and NIH MedlinePlus patient pages. This guide adds a plain-language mechanism diagram, a step-by-step 'what to do during an attack' flow, a forms comparison table (fast vs long-acting), a nitrate-free-gap figure, and an RBA section grounded in the 2023 AHA/ACC Chronic Coronary Disease guideline and FDA drug labels.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info

Take This Guide With You



Scan or visit: <https://go.riasalimd.com/nitrates-guide>

Online: <https://go.riasalimd.com/nitrates-guide>

Office: (727) 943-5200

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com



Visit
RiasAliMD.com

This guide is educational only. Always follow your doctor's specific recommendations.
4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com
Online: <https://go.riasalimd.com/nitrates-guide>



Save
Contact Info